

WHAT IS CLAIMED IS:

1 1. A method comprising:
2 a first network switch receiving a message at one of a plurality of interfaces to the
3 first network switch;
4 the first network switch reading data contained in the message;
5 the first network switch generating first data as a function of both the data and first
6 interface identifier data, wherein the first interface identifier data corresponds
7 to the one of the plurality of interfaces to the first network switch;
8 the first network switch replacing the data in the message with the first data thereby
9 creating a first modified message;
10 the first network switch outputting the first modified message at another of the
11 plurality of interfaces to the first network switch.

1 2. The method of claim 1 further comprising:
2 a second network switch receiving the first modified message at one of a plurality of
3 interfaces to the second network switch;
4 the second network switch reading the first data contained in the modified message;
5 the second network switch generating second data as a function of the first data and a
6 second interface identifier data, wherein the second interface identifier data
7 corresponds to the one of the plurality of interfaces to the second network
8 switch;
9 the second network switch replacing the first data in the first modified message with
10 the second data thereby creating a second modified message;
11 the second network switch outputting the second modified message from another of
12 the plurality of interfaces to the second network switch.

1 3. The method of claim 1 further comprising:
2 the first network switch creating a first switched virtual circuit (SVC) for processing
3 communication data, wherein the first SVC is created in response to receiving
4 the message;

5 the first network switch storing data relating to the first SVC into a memory location,
6 wherein the memory location corresponds to the first data.

1 4. The method of claim 2 further comprising:

2 the first network switch creating a first switched virtual circuit (SVC) for processing
3 communication data, wherein the first SVC is created in response to the first
4 network switch receiving the message;

5 the first network switch storing data relating to the first SVC into a memory location
6 in the first network switch, wherein the memory location in the first network
7 switch corresponds to the first data;

8 the second network switch creating a second SVC for processing communication data,
9 wherein the second SVC is created in response to receiving the second
10 network switch receiving the first modified message;

11 the second network switch storing data relating to the second SVC into a memory
12 location in the second network switch, wherein the memory location in the
13 second network switch corresponds to the second data.

1 5. The method of claim 1 further comprising:

2 the first network switch allocating a portion of its data processing resources to process
3 communication data, wherein the first network switch allocates the portion of
4 its data processing resources in response to receiving the message;

5 the first network switch storing data relating to the allocated portion of its data
6 processing resources into a memory location, wherein the memory location
7 corresponds to the first data.

1 6. The method of claim 1 wherein the message comprises call reference data, and
2 wherein the method further comprises the first network switch copying the call reference data
3 into a memory location, wherein the memory location corresponds to the first data.

1 7. The method of claim 1 wherein generating the first data comprises
2 concatenating the first interface data with the data.

1 8. The method of claim 6 further comprising:
2 the first network switch creating a first SVC for processing communication data
3 transmitted between at least two end devices coupled to the first network
4 switch;
5 the first network switch mapping the first SVC to the call reference data.

1 9. The method of claim 1 further comprising:
2 the first network switch detecting a failure in a data link coupled to the one of the
3 plurality of interfaces to the first network switch;
4 the first network switch generating a restart message comprising a plurality of fields,
5 wherein one of the plurality of fields contains the first interface identifier data.
6 and;
7 the first network switch outputting the restart message from several of the plurality of
8 interfaces.

9 10. The method of claim 1 further comprising:
10 the first network switch receiving a second message, wherein the first network switch
11 comprises a plurality of switched virtual circuits each one of which processes
12 communication data;
13 the first network switch releasing several of the plurality of switched virtual circuits in
14 response to first network switch receiving the second message.

1 11. The method of claim 1 further comprising:
2 the first network switch receiving a second message, wherein the second message
3 comprises second data, wherein the first network switch comprises a plurality
4 of SVCs each one of which is configured to process communication data;
5 the first network switch reading second data contained in the second message;
6 the first network switch generating third data as a function of the second data and the
7 first interface identifier data;
8 the first network switch releasing several of the plurality of SCVs in response to first
9 network switch receiving the second message, wherein the several of the
10 plurality of SVCs correspond to the third data.

1 12. The method of claim 10 wherein the second message is received by the first
2 network switch at the one of the plurality of interfaces thereof, wherein the method further
3 comprises:

4 the first network switch replacing the second data in the second message with the
5 third data thereby creating a first modified second message;
6 the first network switch outputting the first modified second message at another of the
7 plurality of interfaces to the first network switch.

1 13. The method of claim 1 further comprising:

2 the first network switch receiving a restart message comprising a field having a group
3 identifier contained therein, wherein the restart message is received on the one
4 of the plurality of interfaces to the first network switch, and wherein the first
5 network switch comprises a memory that stores records containing call
6 references each of which is mapped to a respective portion of the first network
7 switch's processing bandwidth;

8 the first network switch generating a new group identifier as a function of the first
9 interface identifier data and the group identifier;

10 the first network switch deallocating all portions of its processing bandwidth
11 respectively mapped to call references stored in one or more of the records
12 corresponding to the new group identifier;

13 the first network switch replacing the group identifier of the restart message with the
14 new group identifier thereby generating a modified restart message;

15 the first network switch outputting the modified restart message at the another of the
16 plurality of interfaces to the first network switch.

1 14. A computer readable medium comprising instructions executable by a
2 processor contained in a network switch to implement a method, the method comprising:
3 reading data contained in a message received by the network switch at one of a
4 plurality of interfaces thereof;
5 generating first data as a function of the data and first interface identifier data,
6 wherein the first interface identifier data corresponds to the one of the plurality
7 of interfaces to the network switch;

8 replacing the data in the message with the first data thereby creating a first modified
9 message;
10 outputting the first modified message to another of the plurality of interfaces to the
11 network switch.

1 15. The computer readable medium of claim 14 wherein the method further
2 comprises:

3 the network switch creating a first SVC for processing communication data, wherein
4 the first SVC is created in response to receiving the message;
5 storing data relating to the first SVC into a memory location, wherein the memory
6 location corresponds to the first data.

1 16. The computer readable medium of claim 14 wherein the method further
2 comprises:

3 the network switch creating a plurality of SVCs each one of which processes
4 communication data;

5 the network switch selectively releasing several of the plurality of SVCs in response
6 to the network switch receiving a second message.

1 17. The computer readable medium of claim 16 wherein the method further
2 comprises:

3 reading second data contained in the second message, wherein the second message is
4 received by the network switch at the one of the plurality of interfaces thereof;
5 generating third data as a function of the second data and the first interface identifier
6 data;

7 replacing the second data in the second message with the third data thereby creating a
8 first modified second message;

9 outputting the first modified second message at another of the plurality of interfaces
10 to the network switch.

1 18. The computer readable medium of claim 17 wherein the several of the
2 plurality of SVCs released by the first network switch correspond to the third data.

1 19. The computer readable medium of claim 14 wherein generating the first data
2 comprises concatenating the data with the first interface identifier data.

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1 20. A network switch comprising:
2 a data memory;
3 a plurality of interfaces each one of which is configured to receive communication
4 data;
5 a processor coupled to the data memory, and;
6 an instruction memory coupled to the processor, wherein the instruction memory
7 comprises instructions executable by the processor to implement a method, the
8 method comprising:
9 reading data contained in a message received by the network switch at one of a
10 plurality of interfaces thereof;
11 generating first data as a function of the data and first interface identifier data,
12 wherein the first interface identifier data corresponds to the one of the
13 plurality of interfaces to the network switch;
14 replacing the data in the message with the first data thereby creating a first
15 modified message;
16 outputting the first modified message to another of the plurality of interfaces
17 to the network switch.